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NEW RECORDS AND SYNONYMY IN PATAGONIAN *ATRICHOPOGON* (DIPTERA: CERATOPOGONIDAE)

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ABSTRACT

Atrichopogon obnubilus Ingram & Macfie from southern Argentina and Chile is redescribed and figured. Two similar species from the same area described in the same paper are junior synonyms of *A. obnubilus*: *A. chilensis* Ingram & Macfie and *A. assimilis* Ingram & Macfie (NEW SYNONYMY). *Atrichopogon obnubilus* is the first South American species to be assigned to the subgenus *Meloehelea* Wirth, a group known as ectoparasites of Meloidae and related beetles in the northern hemisphere. The habits of *A. obnubilus* are unknown.

RESUMEN

En este trabajo se redescribe e ilustra la especie *Atrichopogon obnubilus* Ingram & Macfie, la cual está presente en el sur de la Argentina y Chile; asimismo, se reconocen como sinonimos de la misma, a otras dos especies provenientes de la misma zona y que fueron descritas en el mismo trabajo; *A. chilensis* Ingram & Macfie y *A. assimilis* Ingram & Macfie (Nuevos Sinonimos). *Atrichopogon obnubilus* es la primera especie de America del Sur que es asignada al subgenero *Meloehelea* Wirth, grupo conocido en el hemisferio Norte como ectoparasitos de Meloidae y otros Coleopteros. Se desconocen los habitos de *A. obnubilus*.

A convenient and important character for subdivision of the large and widespread biting midge genus *Atrichopogon* Kieffer concerns the number of sclerotized female spermathecae. The majority of species possess only one such spermatheca, but two groups with two spermathecae have been recognized and treated as subgenera. Species of the subgenus *Rostropogon* Remm (1979, type-species *Atrichopogon rostratus* (Winnertz)), are characterized by their large size and unusually long proboscis, and long, slender, maxillary palpi, in addition to their two spermathecae. Species of *Rostropogon* are known from the Palaearctic, Nearctic, and Neotropical Regions.

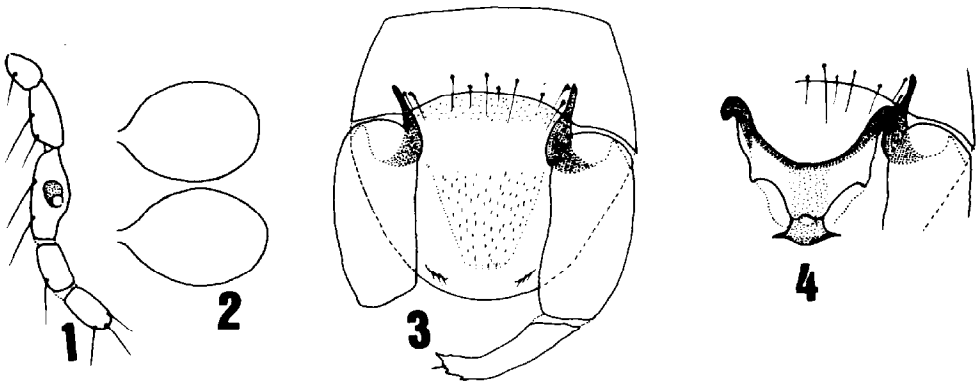
The second group of species with two spermathecae was described by Wirth (1956) as the subgenus *Meloehelea*, with the Holarctic *Atrichopogon meloesugans* (Kieffer) as type-species. Species of this subgenus are usually characterized by their short, upturned proboscis and variously modified and enlarged mandibular teeth in addition to their two spermathecae. Their known habits involve their attraction to and females feeding on the haemolymph of Meloidae and related beetles (Coleoptera). In 1980 Wirth revised his diagnosis of *Meloehelea* to include the characters of *Atrichopogon oedemararum* Stora, a Holarctic species with known beetle-feeding habits, but without the upturned proboscis and with small, unmodified mandibular teeth.

Recent collecting by the senior author in Argentina yielded numerous specimens of a species similar to *Atrichopogon oedemerarum* and apparently belonging to the subgenus *Meloehelea*, although their adult feeding habits are unknown. Search of the literature revealed only three described Neotropical species with two spermathecae and short proboscis, all described by Ingram & Macfie (1931) from northwestern Patagonia and southern Chile: *Atrichopogon obnubilus*, *A. chilensis*, and *A. assimilis*. We borrowed the types of these species from the British Museum (Nat. Hist.) in London for closer study, from which we conclude for the reasons given below that they represent a single species, identical to the one collected recently by the senior author in Argentina.

The following redescription of the species is based primarily on the holotype male and allotype female of *Atrichopogon obnubilus*, with variation in measurements based on our new material given in parentheses. Explanation of the characters used, and a complete diagnosis of the subgenus, can be found in the paper by Wirth (1980).

Atrichopogon (Meloehelea) obnubilus Ingram & Macfie, NEW STATUS
(Figs. 1-4)

Atrichopogon (Kempia) obnubilus Ingram & Macfie, 1931: 175 (male, female; Argentina).
Atrichopogon (Kempia) chilensis Ingram & Macfie, 1931: 175 (female; Argentina, Chile). NEW SYNONYMY.
Atrichopogon (Kempia) assimilis Ingram & Macfie, 1931: 176 (male, female; Argentina). NEW SYNONYMY.



Figs. 1-4. *Atrichopogon obnubilus*: 1, female palpus; 2, female spermatheca; 3, male genitalia, aedeagus omitted; 4, male aedeagus.

Types. Through the courtesy of Bruce Townsend and the Trustees of the British Museum (Nat. Hist.) the junior author was able to study the following type material:

Atrichopogon obnubilus: Holotype male, Argentina, Terr. Rio Negro, F. & M. Edwards. B.M. 1927-63. Bariloche: 25-28.x.1926. Allotype female, same data.

Atrichopogon chilensis: Holotype female, Argentina, Terr. Rio Negro., F. & M. Edwards, B.M. 1927-63. Bariloche: 25-28.x.1926.

Atrichopogon assimilis: Holotype male, Argentina, Terr. Rio Negro, F. & M. Edwards. B.M. 1927-63. L. Correntoso. 18-25.xi.1926. Allotype female, same data.

Allotype Female. Wing length 1.76 (1.7-2.0) mm, breadth 0.77 (0.5-0.8) mm; costal ratio 0.72 (0.75).

Head: Dark brown including antennae and palpi. Antenna with lengths of flagellar segments, 47-32-32-36-36-36-40-40-98-98-100-104-129 microns; antennal ratio (11-15/3-10) 1.76, segments 4-10 about as long as broad, segments 11-14 about three times as long as broad. Palpus (Fig. 1) with lengths of segments, 36-50-79-43-43 microns; third segment with small deep sensory pit; palpal ratio 2.34. Proboscis short, P/H ratio (distance from dorsal margin of clypeus to tip of labrum-epipharynx/distance from clypeus to upper head margin) 1.17. Mandible with 17-26 minute teeth.

Thorax: Uniformly dark brown, with a pair of pale sublateral lines from anterior margin of scutum to just before scutellum; scutellum slightly paler brown. Legs pale brown; lengths on hind leg from femur to T5, 625-620-338-137-72-x; tarsal ratio 2.48 (2.4-2.5). Wing grayish; radial cells well formed, second 3.6 (3.5-4.0) times as long as first; macrotrichia moderately numerous on distal half with a few or none in anal cell. Halter with brownish knob.

Abdomen: Dark brown. Two spermathecae (Fig. 2), short ovoid with short slender necks, well pigmented; subequal, 87 (87-100) by 61 (61-67) microns and 87 by 58 microns including necks.

Male Holotype. Wing length 1.51 mm, breadth 0.58 mm; costal ratio 0.67. Similar to female with the usual sexual differences. Antenna with lengths of flagellar segments, 72-47-47-47-47-47-47-47-43-72-115-108-144 microns; plume of long verticils extending to segment 12. Wing without macrotrichia. Genitalia (Fig. 3) short and broad; ninth sternum with transverse caudal margin, with about 10 fine setae in an irregular transverse row; basistyle slender, basistylar apodeme forming a hooklike plate; dististyle short and stout at base, tapering to bent, hooklike tip with three distal teeth. Aedeagus (Fig. 4) slightly broader than long, with basal arch to about half of total length; rounded caudad with a well-developed, short, broad, caplike distal process.

New Records. ARGENTINA: Chubut Prov., Lago Futalaufquen, 6.ii.1981, G. Spinelli, at light, 1 male; same data except 20.i.1988, sweep net, 4 females; El Alerzal, 22.i.1988, G. Spinelli, sweep net, 2 females, 3 males. Neuquen Prov., Lago Paimun, 31.i.1981, G. Spinelli, 4 males, 5 females; San Martin de Los Andes, 23.iv.1982, M. Gentili, light trap, 3 females; 1.7 km N hotel, Correntoso, 3.ii.1986, G. Spinelli, CDC light trap, 6 females; Ruca Malen, 3.ii.1986, G. Spinelli, sweep net, 6 females; Lago Tromen, 7.ii.1986, G. Spinelli, sweep net, 6 females, 2 males. Rio Negro Prov., Bariloche, Lago Gutierrez, 3.ii.1981, G. Spinelli, light trap, 3 females; Rio Manso, 1.ii.1986, G. Spinelli, sweep net, 4 females, 2 males; Cascada Los Alerces, 24.i.1988, G. Spinelli, sweep net, 1 female; Cerro Tronador, 25.i.1988, G. Spinelli, sweep net, 6 females, 1 male; Cerro Chall-huaco, 26.i.1988, G. Spinelli, sweep net, 1 female, 6 males.

Discussion. A close reading of Ingram & Macfie's three descriptions reveals very little in the way of actual distinctions, but mostly differences in wording and treatment of characters. The characters used in their key prove to be slight or inherently variable: number of macrotrichia in anal cell in female, color of legs, and length of the spermathecal ducts. Examination of type material combined with comparison of our freshly collected specimens showed variation in these characters as indicated by the values in parentheses inserted in the above descriptions.

Atrichopogon obnubilus closely fits the concept of the subgenus *Meloehelea* Wirth, as defined by Wirth (1980). For example in the female the antennal ratio is 1.76 (vs. 1.69-2.50 in other *Meloehelea* spp.), palpal ratio 2.34 (vs. 2.8-4.2), costal ratio 0.72 (vs. 0.68-0.74), tarsal ratio 2.48 (vs. 2.3-2.7), and wing length 1.76 mm (vs. 1.37-1.55). Most species of *Meloehelea* differ in their hairier wings, with macrotrichia numerous in the anal cell, stronger mandibular teeth, and more compressed proximal antennal segments. *Atrichopogon obnubilus* resembles *A. oedemerarum* Stora in its subspherical proximal antennal segments and small mandibular teeth, but *oedemerarum* differs in its shallow palpal pit and hairier wing. Males of *Meloehelea* all have a single, more or less uneven, row of 5-13 setae on the ninth sternum; short, apically curved and pointed dististyles; simple, broad, arched aedeagus with short apical lobe or capitate process; and simple, platelike, hook-shaped, basistylar apodemes.

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